R E P O R T R E S U M E S

ED 011 062 08

MINNESOTA COORDINATION UNIT FOR RESEARCH AND DEVELOPMENT IN OCCUPATIONAL EDUCATION.

BY- MOSS, JEROME, JR. NELSON, HOWARD F.
MINNESOTA UNIV., MINNEAPOLIS

REPORT NUMBER BR-5-0097 PUB DATE MAR 67
REPORT NUMBER ERD-307
CONTRACT OEC-5-85-120
EDRS PRICE -$0.09 HC-$0.92 23F.

DESCRIPTORS- *RESEARCH COORDINATING UNITS, *OCCUPATIONAL INFORMATION, *INFORMATION DISSEMINATION, RESEARCH, *PROGRAM DEVELOPMENT, *VOCATIONAL EDUCATION, MINNEAPOLIS

THE MINNESOTA COORDINATION UNIT FOR RESEARCH AND DEVELOPMENT IN OCCUPATIONAL EDUCATION WAS ESTABLISHED IN JUNE 1965 AT THE UNIVERSITY OF MINNESOTA FOR THE PURPOSES OF COORDINATING AND STIMULATING OCCUPATIONAL EDUCATION RESEARCH, COLLECTING AND DISSEMINATING THE RESULTS OF THAT RESEARCH, PROVIDING TECHNICAL CONSULTATION AND RESEARCH TRAINING, AND CONDUCTING SIGNIFICANT RESEARCH. THE UNIT ENGAGED IN A MULTITUDE OF ACTIVITIES DESIGNED TO ACCOMPLISH ITS PURPOSES. SOME OF THE ACTIVITIES WERE (1) CONVENING AND UTILIZING AN ADVISORY COMMITTEE, (2) ADMINISTERING TWO CONFERENCES OF OCCUPATIONAL EDUCATION RESEARCHERS FROM THE UPPER MIDWEST REGION, (3) CONDUCTING MEETINGS OF INTERESTED RESEARCHERS IN SEVERAL LOCATIONS THROUGHOUT THE STATE, (4) DEVELOPING AND OPERATING A RESEARCH LIBRARY, (5) PUBLISHING 12 RESEARCH-RELATED DOCUMENTS WHICH HAVE BEEN DISTRIBUTED TO ALL INTERESTED INDIVIDUALS IN THE STATE AND TO OTHER COORDINATION UNITS, (6) CONDUCTING A 7-WEEK SUMMER INSTITUTE, A SPECIAL 2-DAY STATISTICAL SEMINAR, AND A 3-YEAR PH.D. FELLOWSHIP PROGRAM TO TRAIN RESEARCHERS, AND (7) CONDUCTING RESEARCH STUDIES AND PARTIALLY SUPPORTING THE STUDIES OF OTHER COMPETENT PERSONS. (TC)

ED011062

ERD-307 NDB

FINAL REPORT
Project No. 5-0097
Contract No. OE-5-85-120

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education
This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

MINNESOTA COORDINATION UNIT

FOR RESEARCH AND DEVELOPMENT IN

OCCUPATIONAL EDUCATION

March, 1967

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

MINNESOTA COORDINATION UNIT

FOR RESEARCH AND DEVELOPMENT IN

OCCUPATIONAL EDUCATION

Project No. 5-0097
Contract No. OE-5-85-120

Jerome Moss, Jr.
Howard F. Nelson

March, 1967

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

UNIVERSITY OF MINNESOTA
Minneapolis, Minnesota

TABLE OF CONTENTS

		Page
I.	INTRODUCTION	1
II.	METHOD	3
	Organization	3
	Personnel	5
	Facilities	7
III.	RESULTS	7
IV.	CONCLUSIONS	14
V.	DISCUSSION	15
VI.	SUMMARY	16
VII.	REFERENCES	17
VIII.	ERIC RESUME	18

I. INTRODUCTION

In the Spring of 1965, two significant conferences were held which provided the setting for the establishment of a research coordination unit in occupational education in Minnesota.

The Wingspread Conference of the Upper Midwest Research and Development Council studied four problems associated with accelerating economic growth in the region: agriculture, non-agricultural employment, urban planning, and education. The close relationship between education and each of the other areas was constantly noted. This conference not only discussed a recommendation that "special attention be given to establish and maintain... within each state, programs of vocational and technical education which are suited to the manpower needs of the area and state for employment," but it also specifically requested that "higher education join with state departments of education in systematically studying ways in which education at all levels can contribute most effectively to economic growth." Such studies were expected to involve research on "human resources, manpower requirements, appropriate allocation of institutional functions, organizational structure, and coordination and development of suitable programs which can be adapted to changing educational needs."

Immediately following the Wingspread Conference, vocational teacher educators from the University of Minnesota met with personnel of the Vocational Section, Minnesota State Department of Education, to discuss means for implementing a systematic, continuing research and development effort within the State. It was decided that such an effort was greatly needed and that it should be centered at the University. It was further determined that the University should focus primarily upon those research and development activities which held promise for long-range program improvement, while the State Department would remain principally concerned with normative program development activities.

Consequently, the availability of funds for establishing a research coordination unit under Section 4 (c) of the Vocational Education Act of 1963 was viewed as an opportunity which should be seized as quickly as possible. An application was submitted by the University in May, 1965 which carried the endorsement of the four public agencies involved in secondary and post-high school education (State Department of Education, State College Board, State Junior College Board, University of Minnesota). The endorsements provided evidence that the four agencies could work together in seeking solutions to educational problems, and demonstrated that the University was the suitable agency to serve the coordinative function.

Informal discussions with representatives of the four educational agencies led to the formulation of tentative purposes for a research coordination unit in occupational education. These were incorporated in the application for funds (and were subsequently confirmed by the members of a formal Advisory Committee). The purposes were:

1. To facilitate the voluntary coordination of occupational research and development activities within the State, and, from time to time, within the Upper Midwest Region.

2. To stimulate research and development activities.

3. To provide clearinghouse services for occupational education research and development efforts.

4. To provide technical consultation in the creation and conduct of relevant research and development projects.

5. To encourage, conduct and facilitate long and short-term education programs for persons preparing for or engaged in occupational education research.

6. To conduct such of the significant basic and applied research needed.

At the inception of the Unit, on June 1, 1965, it was decided to adopt temporarily a service posture. That is, the Unit would attempt to assist, through stimulation and facilitation, the research efforts of others, without intervening in an administrative or supervisory fashion between individual researchers and potential funding sources. This decision necessitated assessing the human resources for research and development in the State, and consequently led to providing research training opportunities.

During the first year of the Unit's operation, and partially through its efforts, a Program Development Unit, with a staff of six professionals, was created in the Vocational Section, State Department of Education. Working closely with the Department of Employment Security, the planned activities of the Program Development Unit provide direct and immediate assistance to vocational schools in keeping their curricular offerings current and efficient. These normative curriculum development activities include identifying quantitative occupational needs, qualitative requirements, and building relevant educational programs. This not only permits, but tends to require, that research conducted by the Coordination Unit address itself to the more basic and methodological problems that affect the work of the PDU. The PDU also provides a potentially direct means for implementing the results of that research. Therefore, to insure a close working relationship between the two organizations, a member of the PDU will be assigned part-time to the Coordination Unit at the beginning of the Unit's new contract period in March, 1967. In anticipation of this relationship, the Unit began to undertake some basic research at the start of its second year of operation.

The Junior College Board also recognized a need for research related to the development of occupational education programs in its rapidly growing system of comprehensive institutions. A member of

their state staff will therefore be assigned to the Coordination Unit for relevant research and development activities on a half-time basis as the Unit moves into its second funding period.

Finally, the recently formed Upper Midwest Regional Educational Laboratory provided a potential mechanism for assisting in the regional coordination of occupational education research and development activities. This opportunity deserved exploration and trial.

Thus, the proposal for the continuation of the Coordination Unit, beyond the first funding period covered by this report (ending February 28, 1967), reflected the new conditions in the State and region by indicating that certain new emphases should be placed upon its original purposes. These goals, which have already been adopted and are presently governing Unit activities, are as follows:

1. To follow-up on activities already completed and underway in an attempt to bring to fruition long-range plans designed to coordinate, stimulate and facilitate occupational education research and development activities in the State.

2. To begin the conduct of programs of research designed to solve significant occupational education problems.

3. To expand the coordinative and stimulative functions of the Unit to the Region through cooperative efforts with the Upper Midwest Regional Educational Laboratory.

II. METHOD

Organization

The Coordination Unit is located physically on the Minneapolis Campus of the University of Minnesota, and administratively in the College of Education of the University.

Chart 1 presents the formal organizational structure of the Unit.

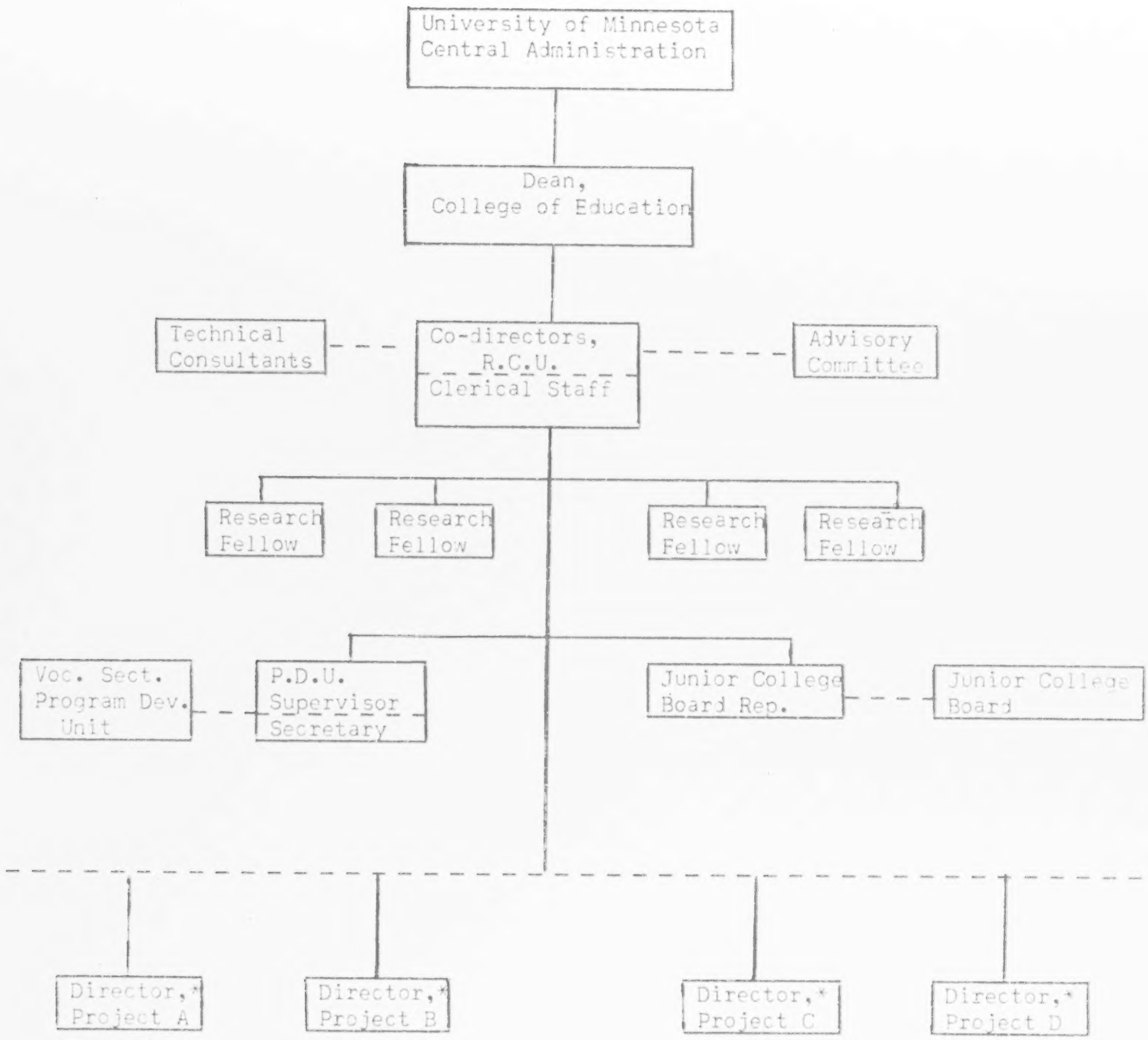
The co-directors are immediately responsible for the administration and operation of the Unit. They report directly to the Dean, College of Education, for personnel and administrative matters.

Technical consultants, including the possibility of special advisory committees, may be utilized when and as they are needed in the planning and conduct of Unit activities.

The Advisory Committee serves to bring together much of the educational leadership in the State directly concerned with the problems and conduct of occupational education. This Committee recommends policy, suggests and facilitates activities, and evaluates

Chart 1.

ORGANIZATION CHART



*Separate projects may be coordinated by the Unit.

progress of the Unit. The membership consists of the following persons: President, Upper Midwest Research and Development Council; Director, Upper Midwest Regional Educational Laboratory; Executive Director, State College Board; Executive Director, Junior College Board; Commissioner of Education, State of Minnesota; Director, Vocational Section, Minnesota Department of Education; Dean, College of Education, University of Minnesota; Vice President for Educational Relationships and Development, University of Minnesota; Research Director, Minnesota Department of Employment Security; and the two co-directors of the Unit (ex-officio).

University staff members and graduate students employed by the Unit on a part-time and/or temporary basis retain their departmental and college affiliations, but are supervised by the co-directors for work pertaining to their Coordination Unit assignments. Non-University personnel employed by or assigned to the Unit on a part-time and/or temporary basis (such as the Program Development Unit and Junior College Board representatives) are supervised by the co-directors for work pertaining to their Unit assignments.

Additional clerical and professional personnel, such as those needed to direct special projects (e.g. specific studies funded by the Upper Midwest Regional Educational Laboratory), may be employed by the Unit.

Personnel

The two co-directors each devote 50% of their time to the work of the Unit. Both are (a) permanent, senior members of the staff of the College of Education, (b) full members of the Graduate School, (c) hold membership in many standing committees of the College, including Policy and Planning, Research, Vocational and Technical, Space and Facilities, and (d) active in professional education organizations (e.g. President, American Council on Industrial Arts Teacher Education; Chairman, AVA Research Committee).

Four research fellows, three half-time and one full-time, have been employed at any given time. They are selected from among the advanced graduate students (Ph.D.) on the campus. Seven different students have been utilized during the twenty months of operation, representing the fields of industrial education, sociology, industrial relations, statistics and measurement.

The clerical staff of the Unit has ranged in number from one full-time secretary in 1965 to two and one-half full-time equivalent persons at present.

Table 1 gives the names, positions, percent times of employment, and dates of employment of the Coordination Unit staff since June, 1965.

Qualified representatives from the Vocational Section's Program Development Unit (half-time) and the Junior College Board (half-time) will be assigned to the Unit in March, 1967.

Table 1.

COORDINATION UNIT STAFF

	NAME	POSITION	% TIME (OR MISC.)	DATES OF EMPLOYMENT
A.	Professional			
	Howard F. Nelson	Co-director	50%	9/16/65 - 2/28/67
	Jerome Moss, Jr.	Co-director	50%	6/16/65 - 2/28/67
	David Pucel	Research Fellow	100% 66 2/3%	7/19/65 - 11/30/65 12/1/65 - 1/16/66
	Brandon B. Smith	Research Fellow	50%	7/1/65 - 2/28/67
	Willard Bailey	Research Fellow	100%	1/1/66 - 8/31/66
	Bryan Knapp	Research Fellow	50%	1/1/66 - 8/19/66
	Marshall Hahn	Research Fellow	50%	6/16/65 - 2/28/67
	Editha Jiloca	Research Fellow	50%	9/16/66 - 2/28/67
	Frank Pratzner	Research Fellow	100%	9/16/66 - 2/28/67
B.	Clerical			
	Jean Schreiver	Senior Secretary	100%	7/26/65 - 12/10/65
	Stella Hultman	Senior Secretary	100%	1/16/66 - 2/28/67
	Sharon L. Horihan	Clerk Typist	Misc.	10/26/65 - 9/1/66
	Sharon Ann Kemnitz	Clerk Typist	Misc.	11/5/65 - 1/15/66
	Barbara Dahms	Clerk Typist	Misc.	9/1/66 - 9/30/66
	Geraldine Kennedy	Clerk Typist	50%	10/1/66 - 2/28/67
	Hazel Moritz	Clerk Typist	50%	1/25/67 - 2/28/67

Facilities

Since receiving its initial support, the University has provided additional funds to refurnish and more than double the original office space allocated to the Unit.

The Unit's location in and administrative association with the University makes readily accessible many resources which facilitate its activities, such as: computer installations and libraries; a staff of nationally known teacher educators in all the vocational fields; consultants from education and related disciplines, as well as research specialists; research organizations, including the Human Learning Center, Center for Programmed Instruction, Minnesota Curriculum Development Laboratory, Industrial Relations Center, and Bureau of Field Studies and Services. But perhaps the greatest resource is advanced graduate students. They not only serve the Unit as staff members, they are among the principal beneficiaries of its operation.

III. RESULTS

This section of the report provides a capsulated summary of the Unit's major activities between June 1, 1965 and February 28, 1967. For convenience, the activities have been organized by the principal purpose which each is presumed to have served. Publications of the Unit, referred to in this section, are listed separately under "References".

A. To facilitate the voluntary coordination of occupational education research and development activities within the State, and, from time to time, within the Upper Midwest Region.

1. An Advisory Committee has been formed and has met several times. The Committee has assisted the Unit by suggesting priorities for functions and activities, and by indicating significant statewide problem areas that deserve investigation. The Committee has also proved to be a useful forum in which members exchanged ideas and points of view relevant to the future coordination of occupational education programs in the State.

2. The above mentioned list of statewide problem areas has been mailed to all potentially interested persons in the State (4).

3. Through the conduct of a special summer institute to train researchers (see E1, below), it was possible to suggest to participants significant problem areas needing study and to provide direct assistance in the development of appropriate research proposals.

4. The Unit has encouraged and assisted in the creation of a Program Development Unit in the Vocational Section, State Department of Education. The Program Development Unit works with the Minnesota Department of Employment Security to identify occupations for which training is needed, suggests institutions in which the training should be provided, and helps develop and coordinate the necessary curriculums.

5. A conference for representatives of occupational education research organizations in Wisconsin, North Dakota, Iowa, and Minnesota was initiated and conducted in March, 1966. The purpose of the two day meeting was to formulate recommendations concerning the operation of the proposed Upper Midwest Regional Educational Laboratory relative to its occupational education research and development activities. Recommendations formulated were subsequently submitted to the Director of the Planning Study for UMREL.

6. Meetings with Junior College Board and Vocational Section, State Department of Education members have been held to explore the mutual research needs of these organizations, to integrate their research plans, and to investigate the implications of their research requirements for Coordination Unit activities.

7. Special efforts have been made, through individual meetings, to establish liaison among research oriented organizations at the University of Minnesota (General College, Bureau of Institutional Research, Industrial Relations Center, Department of Sociology, Minnesota Research and Development Council) and to encourage their participation in studies relevant to occupational education. As a result, several studies now planned or being conducted by these organizations will be directly pertinent to Unit concerns.

8. Discussions have begun with the State Department of Education regarding the integration of vocational education information in their proposed statewide computerized data collection and retrieval system.

9. A conference of seventeen invited representatives from occupational education research and development agencies in Iowa, North Dakota, South Dakota, Wisconsin and Minnesota was held on November 28 - 29, 1966. Funds for the meeting were supplied by the Upper Midwest Regional Educational Laboratory. The purposes of the conference were to exchange information about and explore opportunities for coordinating the planned R & D activities within each state, develop a priority list of significant, relevant problems in the region, select a high priority problem for

study, and appoint a Planning Advisory Committee. A report of the conference has been published and disseminated to interested parties, including all RCU's.(12) Subsequent steps are to write a proposal for a cooperative, region-wide study of the problem selected by the conferees (see F3, below), and to reconvene the conference in April to review the proposal before submitting it to some funding agency.

10. Both co-directors have attended and been active participants in a great many statewide, regional and national meetings, including meetings of RCU personnel, dealing with research and development efforts in education, and in occupational education in particular. The co-directors have also engaged in a considerable number of special activities related to the Unit's purposes, such as serving as field readers for the Bureau of Research, holding membership on the AVA Research Committee, and the ERIC Advisory Committee, and editing a research journal in industrial education. While these efforts only indirectly affect the functions of the Unit, they do serve to help stimulate and coordinate the national research and development effort in occupational education.

B. To stimulate research and development activities.

1. A mailing list (5500) of all persons in the State potentially interested in occupational education research and/or research findings has been created. The list is currently being revised to account for personnel changes since the 1965-66 academic year.

2. The formation of the Unit and the services it provides has been announced through a special direct mailing,(1) professional journals, and general news media.

3. The Unit co-directors have made numerous oral presentations to professional education groups throughout the State for the purpose of stimulating research activity and describing Unit functions and activities.

4. The human resources in the State for occupational education research has been assessed through the conduct of two studies which identified a) persons with interest in research and/or research training and their present level of research competence, and b) the attitudes of school administrators toward facilitating the occupational education research efforts of their staff. By relating the results of these two investigations, a list of potential researchers (with estimated competencies) who have administrative support has been developed. This list

continues to provide a major resource for efforts at stimulating research and for recruiting persons for research training activities. Both studies have been published as one monograph and distributed to other RCU's (10).

5. A study to determine which of three mail techniques can best stimulate interest in the conduct of research was completed. The sample consisted of those persons in the State not interested in research but who had research-supportive administrators. The results will guide future Unit mailings designed to create interest in doing research. The report was sent to all coordination units (9).

6. A follow-up of participants in the 1966 summer research training institute (see E1, below) has been undertaken. The thirty proposals developed during the institute were reviewed, commented upon, and returned to the participants. Separate letters have been sent encouraging prosecution of the studies and volunteering the Unit's consultative assistance; telephone calls have been made as subsequent follow-ups. Copies of the proposals have also been delivered to the State Department for review and possible financial aid where needed.

7. Preliminary conversations have begun with the Vocational Section, State Department of Education, for securing an allocation of state funds for the support of specific, applied research studies on local and statewide vocational problems. At the moment, prospects for success are reasonable.

8. The Unit is now conducting a series of seven meetings throughout the State of interested, qualified researchers (Duluth, Rochester, Mankato, Willmar, Detroit Lakes, Minneapolis, St. Paul). Four of these meetings have been held to date, with a total of forty-eight participants. The purposes are to familiarize potential researchers with the services available from the Unit, and to stimulate their research and development activities by providing information about extant problems, problem priorities, sources of unds, and procedures for obtaining funds.

C. To provide clearinghouse services for occupational education research and development efforts.

1. An occupational education research library has been developed and procedures have been established for securing new studies as they become available.

Microfiche readers have been secured and microfiche copies of studies have been ordered. The library now contains well over 2000 items and is available to anyone who wishes to use it for research purposes. An arrangement has been concluded with the Center for Research and Leadership Development in Vocational Education (The Ohio State University) to contribute to and benefit from the ERIC network.

2. Brochures have been sent to approximately 1500 educational administrators in the State describing research funds available and the general procedures for obtaining them (2). A second, more detailed and up-dated, brochure was written to serve the same basic purposes, and has been sent to interested researchers as well as administrators in the State (8).

3. The final report of a completed study, "The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Technical Curriculums," has been disseminated widely in the State, and also to a selected national group.

4. The Unit co-sponsored a full-day conference on "New Horizons in Industrial Arts Education" (January, 1967). Educators from the entire State were invited to hear three nationally prominent educators present their proposals for curriculum innovations. Over 300 teachers attended the conference.

5. A survey was conducted in 1966 to identify the occupational education studies a) completed within the previous three years, b) then in progress, and c) being proposed. This bibliography was sent to all potentially interested persons in the State (3). A second survey is now in progress to cover the period from 1965; thus far, over 200 studies have been identified. This represents an increase in research productivity of nearly 100 studies conducted within less than half the time. While this increase cannot be assumed directly attributable to Coordination Unit efforts, there is probably some relationship between the two.

6. Copies of the occupational education studies completed in the State since 1965 are now being collected for addition to the library. These studies will be reviewed, summarized and organized, and a report of the results of the cumulative research findings and conclusions will be published and mailed to teachers and administrators in the State.

7. A pamphlet entitled "Technical Report No. 1" was prepared and mailed to all high school, college and university

administrators in the State, as well as to those persons who have previously been identified as interested in occupational education research. The pamphlet contains a description of sources for obtaining research reports and sources of funds, their priorities, and established procedures for proposal application. "Technical Report No. 2", dealing with the development of research proposals, is now being prepared for distribution.

8. Tentative arrangements have been concluded with a colleague at another University to prepare materials for a pamphlet on what research has to say about classroom teaching methods. A Unit staff member is beginning to write similar materials about the development of creative abilities. The manuscripts will be prepared for consumption by occupational education classroom teachers and will contain conclusions and implications drawn from a carefully selected body of available research evidence.

D. To provide technical consultation in the creation and conduct of relevant research and development projects.

1. Members of the Unit have acted as consultants to more than seventy projects. Clients have included staff members from the University of Minnesota, state colleges, private colleges, junior colleges, private schools, local public schools, and private research organizations, as well as graduate students. The consultant service is provided upon request; it in no way constitutes an endorsement of the project, nor is it considered a required step in the process of securing funds from any public or private agency. All clients are encouraged to make continued use of the Unit's services.

2. Both co-directors are acting as field readers for the U.S.O.E. Bureau of Research.

E. To encourage, conduct and facilitate long and short-term education programs for persons preparing for or engaging in occupational education research.

1. A seven-week summer institute for preparing researchers in occupational education was conducted in 1966 (6). Thirty persons in vocational and practical arts education were selected from applicants from North Dakota, South Dakota and Minnesota. The institute, supported by funds from the U.S.O.E., Division of Research Training and Dissemination, was held for the purpose of training "beginners" in research methodology and tools. A tangible outcome of the seven-week period was the production of thirty research proposals focused on the problems perceived by participants.

2. The U.S.O.E., Division of Research Training and Dissemination is currently supporting five graduate fellows in a three-year Ph.D. program designed to prepare researchers in occupational education (5). The program was submitted, and is administered, by the Unit on behalf of all five Vocational Departments in the College of Education. The fellows selected are now in the first year of their program. Approval of a proposal requesting continued support for the five fellows has been received from the U.S.O.E. The Unit also serves as one of the training stations for fellows' research practicum experiences.

3. An advanced research seminar on "Applied Multiple Linear Regression", co-sponsored by the Unit, was held at the University on October 7 - 9, 1966. The principal consultant was Joe Ward, Jr., Chief of the Computer Analysis Branch, Air Force Systems Command. Selected researchers in occupational education from the five state Upper Midwest Region were invited to attend the seminar.

4. Seven graduate students have been employed by the Unit since its formation. The consultation, dissemination, research, and instructional activities in which they have engaged have resulted in an appreciable improvement in their research competencies; t e long-term influence of this experience may be even more significant.

5. A co-director has conducted three regular graduate classes in research methods at the University since the summer of 1965. Students from industrial, business, and distributive education, as well as guidance and counseling, have been enrolled. The development of research proposals by students has been a requirement of these classes.

F. To conduct some of the significant basic and applied research needed.

1. During the past year and a half, the co-directors have been and/or are now conducting research studies relevant to occupational education which were separately funded by the U.S.O.E. and the Graduate School of the University. These include: (a) "Area School Student Selection Project (U.S.O.E. Project No. 5-0148, in progress); (b) "Measuring Creative Abilities in Junior High School Industrial Arts" (Graduate School, completed); (c) "The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Technical Curriculums" (U.S.O.E. Project No. 2050, completed).

2. The staff of the Unit is now engaged in the planning and/or data collection stages of two research projects:

(a) an investigation of the relationships among occupational choice, occupational needs and values, and the occupational perceptions of high school students; (b) a pilot study to validate a new method for identifying the cognitive content of occupations, the congruence of content among occupations, and for specifying relevant educational objectives.

3. As a result of requesting and securing additional funds for separate studies, the Unit is administering and supervising the following two projects: (a) an evaluation of the success of the summer institute for preparing researchers in occupational education, and (b) the development of a proposal for a region-wide study for evaluating the effectiveness of vocational programs. The project director for both studies is Dr. Robert Randleman, Department of Industrial Education, University of Minnesota.

4. Several investigators are receiving partial support from the Unit (not including any personnel costs) in the planning or conduct of their studies: (a) the prediction of trainee success, with emphasis on educational background, in MDT programs, (b) evaluation of an undergraduate industrial teacher education program, (c) the effect of creative abilities on the success of convergent and divergent methods of instruction, (d) the influence of maturity and intelligence factors in learning certain psychomotor skills, (e) a comparison of the effectiveness of comprehensive and specialized post-high school institutions for providing vocational-technical instruction, and (f) a survey of doctoral dissertations in industrial education completed since 1964.

IV. CONCLUSIONS

The activities of the Coordination Unit to date have an obvious, direct relationship to the Unit's stated purposes as formulated by the Advisory Committee and approved by the U.S.O.E. An evaluation of the effectiveness of those activities, however, must of necessity be subjective; the effort and funds expended primarily represent a long range investment in the development of human resources for research.

The co-directors believe that considerable progress has been made toward achieving Unit goals -- one tangible piece of evidence is the increased tempo of research and development activities in the State. But continued effort is necessary if the work to date is to be brought to fruition.

At the conclusion of approximately twelve months of operation the Advisory Committee reviewed the Unit's activities in terms of its

purposes, and re-examined those purposes in light of changed conditions in the State. The Committee concluded that (a) the Unit had made satisfactory progress during the first year, (b) the Unit should begin to enlarge its scope of coordinative activities to the Region, and should begin to undertake staff studies of a substantive nature, and (c) the proposed activities of the Unit, for its second year of operation, were suitable to the ends envisioned. A letter from the Committee to this effect was transmitted to the Bureau of Research as part of the Unit's request for continuation funds.

The co-directors and the Advisory Committee will continue to review periodically both the appropriateness of Unit goals and the relevance and effectiveness of its activities. Quarterly technical reports shall be submitted to the Division of Adult and Vocational Research, and annual evaluative reports will be submitted at the close of the 1966-67 and 1967-68 academic years.

V. DISCUSSION

There is a wide disparity among RCU's in terms of their purposes, the relative emphases placed upon purposes, and the resultant activities these differences engender. Part of these differences reflect changing views within the Bureau of Research; much more significant, and more relevant causes however, are variations in the needs perceived by individual States, the continuously evolving conditions within States, and the administrative setting in which the RCU's function.

The citizens of Minnesota are now contributing an unusually high proportion of their incomes to the support of education. A reasonably well developed, and growing, system of occupational education has been established. But few untapped resources remain, and the limited funds available for occupational education research and development activities are being channeled primarily into immediately needed normative program development projects through the Program Development Unit of the Vocational Section, State Department. In addition, the kind of projects typically conducted by personnel in local and area vocational programs are directed toward relieving the immediate, critical operational problems that confront them. While these efforts are necessary, and should be increased, it does leave important gaps in Minnesota's total research and development requirements.

The decision to locate the Minnesota Research Coordination Unit at the University provides an opportunity to help fill those gaps. The nature of the personnel available at the University, its internal organization, tradition, values and resources lend themselves most

appropriately to the kinds of activities that are needed. Consequently, the role of the Coordination Unit will probably place increasing emphasis upon (a) the clearinghouse function, particularly organization and dissemination of the results of research that will be helpful in improving educational practice, (b) the coordination of regional research and development activities to reduce unnecessary duplication of effort and maximize the impact of the projects undertaken, (c) the conduct of research and the development of experimental curricula with generalizable results that have promise for making major, long-range improvements in program quality, and (d) the training of research personnel.

VI. SUMMARY

The Minnesota Coordination Unit for Research and Development in Occupational Education was established in June, 1965 at the University of Minnesota for the purposes of coordinating and stimulating occupational education research, collecting and disseminating the results of that research, providing technical consultation and research training, and conducting significant research.

The staff of the Unit consists of two co-directors (half-time each), four research fellows (one full-time and three half-time), and clerical personnel. The co-directors report directly to the Dean, College of Education.

Since its inception the Unit has engaged in a multitude of activities designed to accomplish its purposes. Some of these activities were: (a) convening and utilizing an Advisory Committee, (b) administering two conferences of occupational education researchers from the Upper Midwest Region, (c) conducting meetings of interested researchers in several locations throughout the State, (d) developing and operating a research library, (e) publishing twelve research-related documents which have been distributed to all interested individuals in the State and to other coordination units, (f) conducting a seven-week summer institute, a special two-day statistical seminar, and a three-year Ph.D. fellowship program to train researchers, and (g) conducting research studies and partially supporting the studies of other competent persons.

Subjective evaluations indicate that these activities are relevant, and are helping to accomplish the purposes of the Unit.

VII. REFERENCES

Minnesota Research Coordination Unit Publications

(1) _____. Introducing the Minnesota Research Coordination Unit in Occupational Education. 1965.

(2) _____. Funds Available for Research in Occupational Education. 1965.

(3) _____. Bibliography of Recent Studies in Occupational Education in Minnesota. 1966. 11 p.

(4) _____. "Some Occupational Education Problem Areas in Minnesota". 1966. 2 p.

(5) _____. Graduate Fellowship Announcement. 1966.

(6) _____. Summer Training Institute for Researchers in Occupational Education (Announcement). 1966.

(7) Moss, Jerome, Jr. The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Technical Curriculums. 1966. 31 p.

(8) _____. Research and Development Funds Available From the U. S. Office of Education. 1966.

(9) Bailey, W. F. and Moss, J. A Comparison of Mail-Techniques for Stimulating Interest in Occupational Education Research. 1966. 12 p.

(10) Pucel, David J., et. al. Estimating the Human Resources for Research in Occupational Education in Minnesota. 1966. 17 p.

(11) _____. Technical Report No. 1.: Information for Proposal Preparation and Sources of Research Funds. 1967. 19 p.

(12) Moss, Jerome, Jr. Report of a Five-State Occupational Education Research and Development Planning Conference. 1967. 8 p.

OE 6000 (9-65) DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
WASHINGTON 25, D.C.

ERIC DOCUMENT RESUME

DATE OF RESUME: 3/20/67

1. ACCESSION NO. | 2. ERIC SATELLITE CODE | 3. CLEARING HOUSE CONTROL NO.

FOR INTERNAL ERIC USE ONLY
(Do Not Write In Space Below)

4. SOURCE
College of Education, University of Minnesota, Minneapolis, Minnesota.

DATE RECEIVED

IS MICROFILM COPY AVAILABLE? *(Check one)*
☐ Yes ☐ No

5. TITLE
Minnesota Coordination Unit for Research and Development in Occupational Education. (Final Report)

IS DOCUMENT COPYRIGHTED? *(Check one)*
☐ Yes ☒ No

HAS COPYRIGHT RELEASE BEEN GRANTED? *(Check one)*
☒ Yes ☐ No

6. AUTHOR(S) Moss, Jerome, Jr. and Nelson, Howard F.

DATE, NAME, AND COMPLETE ADDRESS OF AUTHORITY
TYPE OF RELEASE

7. DATE 3/1/67 | 8. PAGINATION 18 | 9. REFERENCES

10. REPORT/SERIES NO.

11. CONTRACT NO. OE-5-85-120

12. PUBLICATION TITLE

13. EDITOR(S)

14. PUBLISHER

15. ABSTRACT *(250 words max.)*

The document is a history of the Minnesota Research Coordination Unit between June, 1965 and February, 1967 -- from its inception to the end of the first contract period. The report contains information about Unit purposes, organization, personnel and facilities, the various activities in which it engaged, a subjective evaluation of progress in terms of purposes, a brief rationale for selecting or emphasizing certain purposes and functions (past and future), and a list of Unit publications.

16. RETRIEVAL TERMS *(Continue on reverse)*

17. IDENTIFIERS

Figure 3. ERIC Document Resume